

Phase I Environmental Site Assessment

Rhodes Kingman 7600 Site

Rhodes Homes, Inc.
Kingman, AZ

Final
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Phase I Environmental Site Assessment Rhodes Kingman 7600 Site Addendum

Figure 2-1 - Site Location: Excerpt from Valentine, AZ – 30 by 60 Minute Series (Topographic), United States Geological Survey, 1984.

Figure 2-2 - Site Location and Surrounding Area: Aerial Photograph – 1998, US Geological Survey.

Appendix B – Photographs: Site Photographs were taken by Mr. Scott Byram of Stanley Consultants on July 26, 2004.

Executive Summary

A Phase I Environmental Site Assessment of approximately 7,600 acres of property located northeast of the City of Kingman, and generally east of the Kingman Airport in Mohave County, Arizona was performed by Stanley Consultants, Inc. The site occupies portions of 18 sections cumulatively identified as parcel numbers 1 through 8.

The assessment was completed in general accordance with the procedures outlined in ASTM E1527-00, Standard Practice of Environmental Site Assessments: Phase I Environmental Site Assessment Process.

The site currently consists almost entirely of open space, apparently used as range land for cattle grazing. The easternmost portion of the site is located in the Peacock Mountains. The rangeland includes a few corrals and water tanks, but is otherwise undeveloped. The area is served by several sand roads. It is most likely these areas have always generally been used in this fashion.

The Parcel 7 (NW1/4 Section 24) portion of the site, which is located immediately north of the Kingman Airport, appears to be a junkyard. This portion of the site includes scrap metal, tires, pallets, old machinery, and a trailer. It is unknown how long this parcel has been used in this fashion.

From approximately 1941 to 1948 the Kingman Airport and Industrial Park, which is immediately adjacent to the site, was owned by the United States. The property was used from approximately 1942 through 1945 as an aerial gunnery training facility. From 1946 through 1948 the facility was used as an aircraft storage area. As many as 7,000 aircraft, including many heavy bombers and reportedly occupying an area of approximately five square miles, were stored at the facility pending either sale or recycling (for the scrap aluminum value). It is unclear if these activities extended beyond the current airport boundary or onto the site.

The Kingman area was originally settled in the 1880's. The railroad was apparently constructed in the area at approximately that same time (Kingman was reportedly a railroad siding). U.S. Highway 66 was apparently constructed in the area during the 1920's. An airport was apparently present at the current airport site during the 1920's as well.

The following environmental conditions or concerns were identified during the assessment:

1. The accumulation of waste materials on the Parcel 7 portion of the site.
2. The reported presence of low levels of chromium contamination in some of the water supply wells in the general site area.
3. The potential effects of past military activities reported in the general site area during the Second World War.

The following actions are recommended:

1. Removal and proper disposal of the solid wastes and miscellaneous materials present on the Parcel 7 portion of the site.
2. Evaluation of surface soils on the Parcel 7 portion of the site for the presence of residual contamination by fuels, oils, etc due to the storage/disposal of waste and scrap materials.
3. Testing of any proposed groundwater supplies for evidence of contamination by heavy metals and/or volatile organic compounds.

Detailed information regarding these, and other observations, and site history is provided in the report.

Note: The Appendix C contains the Executive Summary of the separate report titled *Phase I Environmental Site Assessment – Rhodes Kingman 7600 Site*, August 2004, Stanley Consultants.

Section 1

Introduction

1.1 Purpose

The purpose of this Phase I Environmental Site Assessment (ESA) is to identify recognized environmental conditions. The term recognized environmental condition is defined as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

1.2 Involved Parties

Stanley Consultants, Inc., performed this assessment at the request and benefit of Rhodes Homes, Inc. The assessment includes approximately 7,600 acres of property located northeast of the City of Kingman, and generally east of the Kingman Airport in Mohave County, Arizona.

1.3 Scope of Work

The ESA was conducted in general accordance with ASTM E1527-00 Standard Practice of Environmental Site Assessments: Phase I Environmental Site Assessment Process. According to ASTM E1527-00, Phase I Environmental Site Assessment shall have four components, described as follows:

1. *Records Review* - The purpose of the records review is to obtain and review available records that will help identify recognized environmental conditions in connection with the property.

2. *Site Reconnaissance* - The purpose of the site reconnaissance is to visually and physically observe the property (including buildings) and, to the practical extent, the adjoining properties for uses and evidence of previous uses that are indicative of recognized environmental conditions.
3. *Interviews* - Interviews of the current owners and occupants of the property and interviews of local agency officials to the extent they are reasonably available are performed to help identify recognized environmental conditions in connection with the property.
4. *Report* - The purpose of the report is to document the activities performed during the assessment, provide information supporting the analysis opinions and conclusions found in the report and summarize the findings of the assessment.

The following activities, among others, are excluded from the scope of work for a Phase I ESA as described in ASTM E1527-00:

- Testing sampling of materials (e.g. soil water, air, or building materials).
- Evaluations for asbestos, Radon, lead-based paint, lead in drinking water, and wetlands.

Section 2

Site Description

2.1 Overview

The site currently consists primarily of open space, although a small portion of the site appears to be a junkyard including scrap metal, tires, pallets, old machinery, and a trailer. The site is accessible via a network of sand roads.

The location of the site is shown on Figure 2-1.

The site occupies portions of 18 sections covering a total of approximately 7,600 acres, also identified as parcel numbers 1 through 8.

2.1.1 Location

The site consists of the following properties, all located in Mohave County, Arizona.

Township	Section	Parcel Identification
T21N R15W	Part of NE1/4 Sec. 9	Parcel 1
T22N R14W	W1/2 Sec.19	Parcel 2
T22N R14W	S1/2, plus part of the NE1/4 Sec. 21	Parcel 2
T22N R14W	Sec.29	Parcel 1
T22N R14W	N1/2, plus the SW1/4 Sec. 30	Parcel 3
T22N R14W	Sec. 31	Parcel 2
T22N R15W	W1/2 Sec. 3	Parcel 4
T22N R15W	S1/2 Sec. 19	Parcel 5
T22N R15W	Part of NW1/4 Sec. 34	Parcel 5
T22N R15W	All of Sections 21, 25, 27, 29, 31, 33, 35	Parcel 5
T22N R16W	Part of NW1/4 Sec. 24	Parcel 7
T23N R15W	Part of SE1/4 Sec. 21	Parcel 8



2.1.2 Description

Most of the Rhodes Kingman 7,600 site is vacant open space, apparently used as range land for cattle grazing. The site slopes gradually upward toward the east and southeast toward the Peacock Mountains. The easternmost portion of the site is located in the mountains. The rangeland includes a few corrals and water tanks, but is otherwise undeveloped. The area is served by several sand roads.

The Parcel 7 (NW1/4 Section 24) portion of the site, which is located immediately north of the Kingman Airport, appears to be a junkyard. This portion of the site includes scrap metal, tires, pallets, old machinery, and a trailer. A for sale sign was observed at the westerly edge of the parcel.

Some shooting sport-related debris (shell casings, etc.) was noted in the NW1/4, NW1/4 Section 29 near a manmade embankment in a small wash. A minor amount of scrap metal was noted near this location as well.

The Parcel 6 (NW1/4 Section 34) portion of the site contains a corral area and several metal tanks, most likely stock watering tanks. Most are in scrap condition now.

No utility systems, other than overhead power, were observed on the site.

The site and surrounding areas are shown on Figure 2-2.

Photographs of the site and surrounding areas are included in the Appendix B.

2.1.3 Adjacent Properties

The properties around the site include the Kingman Airport and Industrial Park to the west, and open space to the north, east, and south. Interstate Highway 40 is located approximately three miles south of the site. The ATSF Railroad is located approximately one mile northwest of the site. U.S. Highway 66 parallels the railroad approximately ¼ mile farther from the site.

There are a few residential properties scattered throughout the area.

2.2 Environmental Setting

2.2.1 Topography

Local topography varies from lows of approximately 3,300 ft. MSL along the west and northwest portions of the site to approximately 5,200 ft. MSL in the Peacock Mountains along the easterly edge of the site.

Drainage from the site is generally to the west and northwest toward the Hualapai Valley via Frees Wash and a network of unnamed washes and surface drainage channels.

2.2.2 Geology and Soils

Based on USDA Soil Conservation Service mapping for the area the dominant soil type in the site area is most likely the Bucklebar sandy loam. This is a deep to moderately deep, well to moderately well drained, coarse grained soil with moderate hydraulic conductivity and a typical depth to the water table of greater than six feet. These soils reportedly do not meet the requirements for hydric soil.

The site and surrounding area are underlain by precambrian age metamorphic rocks, reportedly orthogenesis and paragneiss. Due to the considerable expanse of the site and variation in the topography of the site from east to west, depth to bedrock would be expected to vary greatly beneath the site.

2.2.3 Hydrogeology

According to the Arizona Department of Water Resources (DWR), basin and range aquifers are generally the principal sources of ground water in the site area. These aquifers are present in alluvium-filled basins interspersed between ranges of northwest to southeast trending mountains in the northwest portion of Arizona. The site is located within the Hualapai Valley basin.

The Hualapai Valley basin covers an area of approximately 1,820 square miles. The basin is bounded on the west by the Cerbat and White Mountains, on the east by the Grand Wash Cliffs and Music Mountains, on the south by the Peacock and Hualapai Mountains, and on the north by Lake Mead.

The Hualapai Valley basin-fill sediments reportedly range to as much as 6,400 feet thick, and have been divided into three separate units: a younger alluvium, an intermediate alluvium, and an older alluvium.

The younger alluvium includes streambed deposits in Hualapai Valley and in various mountain canyons. The unit seldom exceeds 50 feet in thickness, and is composed of silt to gravel-sized particles. The younger alluvium yields small amounts of water to stock and domestic wells in mountain canyons. Local rock formations are generally non-water bearing, although fractured and weathered zones in the rocks do provide some water to low-yield wells, and numerous springs and seeps.

In the central part of the valley, the younger and intermediate alluvium are above the water table, and therefore, dry. The intermediate alluvium is a dependable aquifer only along the valley margins where the unit intersects the water table. Well yields from the intermediate alluvium range up to 500 gallons per minute. The intermediate alluvium is made up of coarse-grained sands, silts, and clays.

The older alluvium is the main aquifer in the Hualapai Valley basin. Volcanic rocks are reportedly interbedded with the older alluvium in the southern part of Hualapai Valley and form a secondary system. The older alluvium can store and transmit large amounts of water; well yields up to 1,500 gallons per minute have been reported. Depth to water ranges from 500 to 900 feet below land surface in the central and southern parts of the basin to 300 feet below land surface near Red Lake.

The City of Kingman has a well field in the southern portion of the valley near the airport that is responsible for most of the reported groundwater withdrawals in the basin. The remainder of the pumpage is for stock and domestic uses by the ranches and settlements in the valley.

Water level declines have been reported in the southern part of Hualapai Valley. A well at the southwest edge of the airport had a recorded water level decline of 1.0 feet per year for the period 1986 to 1992. The greatest water level decline recorded was 2.0 feet per year between 1980 and 1991 in a well about three miles northwest of the airport. The average water level decline rate for the basin was reported in 1994 by DWR to be 1.4 feet per year.

According to DWR, the Hualapai Valley is probably in a state of limited groundwater depletion. Outflow is probably between 2,500 acre-feet per year and 4,000 acre-feet per year. Total groundwater availability to 1,200 feet below land surface in the basin is estimated to be 5,000,000 acre-feet.

The chemical quality of water from the older alluvium aquifer in the Hualapai Valley generally is reported to be good. Total dissolved solids range from 210 to 1,100 milligrams per liter (mg/l); however, in some areas in or near the mountains groundwater is highly mineralized ranging from 1,430 to 2,365 mg/l. The United States Environmental Protection Agency recommended secondary maximum contaminant level for total dissolved solids in drinking water is 500 mg/l.

Chromium has reportedly been detected in several of the water production wells operated by the City of Kingman in the airport area. In 1982, eight of ten known wells drilled in the airport area contained chromium in excess of the maximum contaminant level of .05 milligrams per liter. In 1992, the maximum contaminant level for chromium was raised to .10 milligrams per liter; all of the water sample results for the City of Kingman's airport area production wells were then under the new maximum contaminant level for chromium. Prior water quality studies have reported an increase in chromium below a depth of about 1,000 feet.

A search for available well records was conducted for Stanley Consultants by EDR, Inc. The EDR search indicated two records of wells within one mile of the center of the site area. This search is most likely incomplete, as many more wells are thought to be present on the general site area. It is unknown how many of these wells, if any, are still in use. The EDR information indicated well depths of approximately 480 to 1,025 feet, with yields reported to be 5 and 750 gpm respectively.

Copies of the EDR information are provided in the Appendix A.

2.3 Site History

Review of historical information indicates that past site uses were most likely similar or identical to current site uses, except as noted in the following.

The site currently consists almost entirely of open space, apparently used as range land for cattle grazing. The easternmost portion of the site is located in the Peacock Mountains. The rangeland includes a few corrals and water tanks, but is otherwise undeveloped. The area is served by several sand roads. It is most likely these areas have always generally been used in this fashion.

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The Kingman area was originally settled in the 1880's. The railroad was apparently constructed in the area at approximately that same time (Kingman was reportedly a railroad siding). U.S. Highway 66 was apparently constructed in the area during the 1920's. An airport was apparently present at the current airport site during the 1920's as well.

Additional discussion of apparent site history and surrounding properties is included in the Section 3 summaries of the topographic mapping, aerial photograph, and other information for the property.

2.4 Site Interviews

No interviews were conducted on site.

2.5 Site Observations

The site was visually evaluated by Scott Byram of Stanley Consultants on July 19, 2004. The weather during the visit was sunny and dry. The temperature during the visit was approximately 105 deg. F.

The site includes all or portions of 18 sections located in five townships near the Kingman Airport in Mohave County, Arizona. The bulk of the site is located within a three mile tall by eight mile wide corridor lying directly east of the airport, with a few outlying parcels (refer to listing in Section 2.1 above, and Figure 2.2). Total area of the site is approximately 7,600 acres.

Most of the site appears to be vacant open space, apparently used as range land for cattle grazing. The site slopes gradually upward toward the east and southeast toward the Peacock Mountains. The easternmost portion of the site is located in the mountains. The rangeland includes a few corrals and water tanks, but is otherwise undeveloped. The area is served by several sand roads.

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The properties around the site include the Kingman Airport and Industrial Park to the west, and open space to the north, east, and south. Interstate Highway 40 is located approximately three miles south of the site. The ATSF Railroad is located approximately one mile northwest of the site. U.S. Highway 66 parallels the railroad approximately ¼ mile farther from the site.

There are a few residential properties scattered throughout the area.

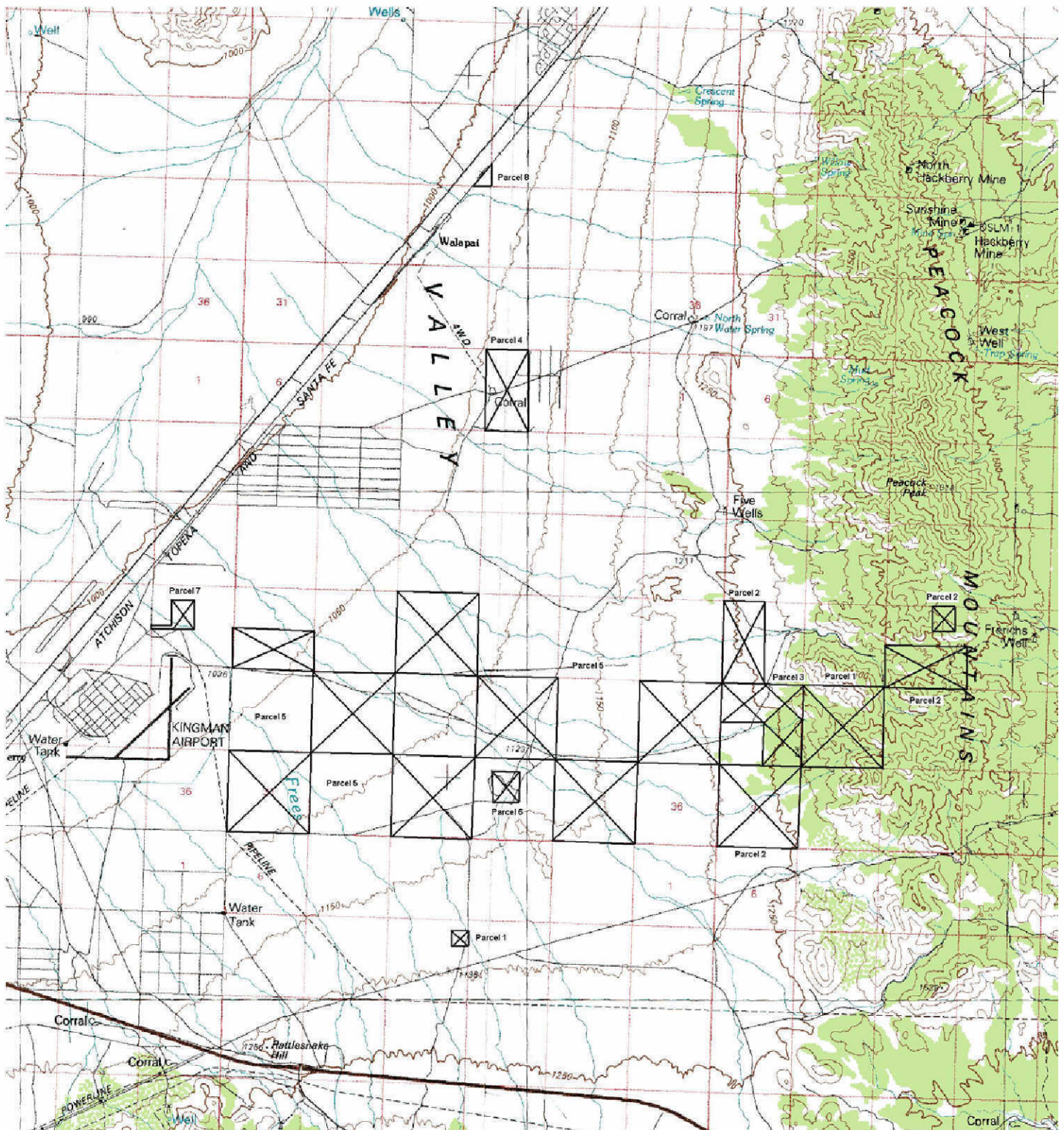
Bulk hazardous materials were not observed on the site. Hazardous material containers were not observed on the site. Visual evidence of the presence of underground tanks was not noted on the site.

No above ground tanks were noted on the site other than as described above. No solid waste disposal was noted on the site, other than as described above. No hazardous substances, except as described above, were noted on the site.

The site is served by overhead power. No other utility systems were observed on the site.

Site drainage is generally toward the west and northwest via overland flow and a network of washes.

Photographs of the site are included in Appendix B.



Site Location
Figure 2-1